

Reactions of group 1 metals with water – fill-in sheet

Introduction

Lithium, sodium and potassium are placed at the top of group 1 of the periodic table.

Your teacher will show you their reactions with water.

Watch these carefully, then complete this worksheet.

Tasks and questions

7
Li
3
<small>lithium</small>
23
Na
11
<small>sodium</small>
39
K
19
<small>potassium</small>

1. Complete this table.

	Lithium	Sodium	Potassium
How is it stored?			
What does it look like?			
Is it shiny or dull when cut?			
Floats or sinks in water?			
Flame colour in the reaction?	Red		

2. Cross out the incorrect words in each bold choice.

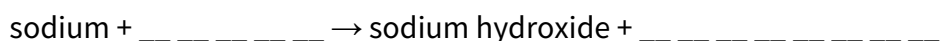
- (a) Lithium, sodium and potassium are **easy** | **difficult** to cut with a scalpel.
- (b) **Lithium** | **potassium** sets on fire easily when it reacts with water.
- (c) When these metals react with water, they make **oxygen** | **hydrogen** | **carbon dioxide**.
- (d) You can test for this gas using a **lighted** | **glowing** splint which **relights** | **pops**.
- (e) At the end of experiment, the universal indicator in the water is **red** | **green** | **purple**.
- (f) When these metals react with water, they make **acidic** | **alkaline** | **neutral** solutions.

3. Lithium reacts with water to form lithium hydroxide and hydrogen.

The word equation for this reaction is:



- (a) Sodium reacts with water in a similar way. Complete the word equation below.



- (b) Potassium also reacts with water in a similar way. Write the word equation below.

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4. Write the names of the three metals in order of their reactivity. Put the **least** reactive metal first.

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ANSWERS

1. Completed table:

	Lithium	Sodium	Potassium
How is it stored?	In oil	In oil	In oil
What does it look like?	Grey solid	Grey solid	Grey solid
Is it shiny or dull when cut?	Shiny	Shiny	Shiny
Floats or sinks in water?	Sinks	Sinks	Sinks
Flame colour in the reaction?	Red	Yellow	Lilac

2. (a) easy (d) lighted, pops
(b) potassium (e) purple
(c) hydrogen (f) alkaline
3. (a) sodium + water → sodium hydroxide + hydrogen
(b) potassium + water → potassium hydroxide + hydrogen
4. lithium, sodium, potassium

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